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98-147

June 15, 1999

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Federal Communications Commission
Magalie R. Salas, Secretary
445 12th Street, S.W.
Room TW-B204
Washington, D.C. 20554

Dear Ms. Salas:

Enclosed for filing please find an original and four (4) copies of the Comments of Rhythms NetConnections Inc. in the above-captioned proceeding.

Also enclosed is a copy market "Receipt" to be date stamped.

Please do not hesitate to contact me with any questions or concerns.

Sincerely,

Stephanie A. Joyce
Attorney for Rhythms NetConnections Inc.

Enclosures

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List A B C D E

ORIGINAL

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	CC Docket No. 98-147
Deployment of Wireline Services Offering	)	
Advanced Telecommunications Capability	)	

COMMENTS OF RHYTHMS NETCONNECTIONS INC.

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Dated: June 15, 1999

SUMMARY

The outcome of this docket will define the pace and scope of the deployment of advanced services, and specifically DSL services, throughout the United States. The ability of consumers – principally residential consumers – to obtain DSL services from any carrier over the same loop over which they receive voice services will offer simple, high-quality and inexpensive access to the Internet and other broadband services. Competitively neutral xDSL spectrum compatibility rules will likewise ensure increased customer access to advanced services by permitting CLECs to deploy all xDSL technologies safely and more quickly, without anticompetitive interference from their ILEC rivals. The benefits for American consumers of these measures are substantial, as they will bring the full capabilities of DSL services to consumers as rapidly as possible.

Congress's mandate in the Telecommunications Act of 1996 to encourage the rapid deployment of advanced services throughout the United States requires the Commission to conclude that ILECs must offer line sharing arrangements with xDSL carriers. The technical feasibility of line sharing has been proven. The Commission should rule that data CLECs must be permitted access to the loop functionality of transmitting data services over existing loops, as an unbundled network element, subject to nondiscriminatory prices, terms and conditions according to Section 251 of the 1996 Act.

In addition, the Commission should take an active, participatory role in industry standards bodies to ensure that the development and application of xDSL spectrum compatibility and spectrum management standards are competitively neutral. Because ILECs have both the power and the incentive to cause biased influence within the standards-setting process, the Commission should participate in and oversee the adoption of xDSL standards as well as their application to CLECs that provide DSL services. Moreover, in order best to speed deployment

of xDSL services to consumers, the Commission should adopt a pro-active national standard for approving innovative xDSL technologies for which no technical standard presently exists.

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COMMENTS OF
RHYTHMS NETCONNECTIONS INC.

Rhythms NetConnections Inc. and the ACI Corp. family of subsidiaries (collectively "Rhythms") hereby submits these comments in response to the Commission's March 31, 1999 *Advanced Services FNPRM*[1] in the above-captioned docket.

INTRODUCTION

The Commission seeks comment on several issues surrounding deployment and provision of high-speed, high-bandwidth data services, specifically Digital Subscriber Line ("DSL") services. As one of the few companies bringing the promise of high-speed data to American consumers, Rhythms is at the forefront of making Congress's vision a reality across the country. Rhythms is a premiere nationwide provider of high-speed data services, including DSL, and is thus uniquely qualified to respond to the Commission's inquiries.

Rhythms provides comprehensive networking solutions using high-speed data communications that combine local access through the deployment of, among other things, a range of xDSL technologies with capacity-balanced local and wide-area data networks. Rhythms began providing service in San Diego on April 1, 1998 and is currently operating in 15 major urban and suburban markets throughout the United States. Rhythms' subsidiary, ACI

[1] *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket No. 98-147, First Report and Order and Further Notice of Proposed Rulemaking, FCC 99-48 (rel. Mar. 31, 1999) ("*Advanced Services Order*" and "*Advanced Services FNPRM*," respectively).

Corp., has state commission-approved interconnection agreements with every Regional Bell Operating Company ("RBOC") and other major ILECs. Rhythms' aggressive DSL deployment and extensive experience with xDSL technologies enable Rhythms to speak authoritatively to the technical and operational issues raised in the *Advanced Services FNPRM* in a comprehensive fashion.[2]

The first of these issues, line sharing, concerns whether, and in what manner, incumbent local exchange carriers ("ILECs") must permit competitive local exchange carriers ("CLECs") to transmit DSL services on the same loop over which the ILECs already provide voice services. The second issue, typically termed "spectrum compatibility," concerns the need for rules to monitor the interaction among network technologies, including xDSL. Each of these issues profoundly affects the ability of CLECs to provide competitive xDSL services. The Commission's decision in this proceeding will therefore determine the viability of competition in the advanced services marketplace throughout the nation. The Commission's active participation in, and oversight of, the implementation of competitively neutral solutions to these issues is a crucial component in the development of competition in broadband services for the benefit of all Americans.

DISCUSSION

I. THE COMMISSION SHOULD MANDATE LINE SHARING AS A UNE FOR xDSL SERVICES IN ORDER TO PROMOTE TELECOMMUNICATIONS COMPETITION THAT BENEFITS ALL CONSUMERS

The *Advanced Services FNPRM* tentatively concludes that ILECs must provide CLECs with "shared line access [that] makes it possible for a competing carrier to offer advanced

[2] The issues presented for this proceeding are presently the subject of an extensive interconnection arbitration between Southwestern Bell Telephone Company and ACI Corp. in Texas. As a result, Rhythms has researched and litigated these issues exhaustively, enabling it to provide the Commission with an informed view of the technical and competitive ramifications of line sharing and spectrum compatibility.

services over the same line that a consumer uses for voice service without requiring the competing carrier to take over responsibility for providing the voice service."[3] The considerable advances made by CLECs, including Rhythms, since the Commission's initial inquiries on line sharing demonstrate that this conclusion is eminently sound.[4] For all of the following reasons, as well as those Rhythms articulates in the UNE Remand proceeding,[5] the Commission should adopt this conclusion without delay.

Line sharing will promote deployment of xDSL services. The Commission has the authority under Section 251 of the 1996 Act to require ILECs to implement line sharing over copper loops at terms and prices that will advance Congress's expressed goals in Section 706 of promoting the rapid development of competition in advanced services.[6] Line sharing allows competitors to deploy xDSL services over pre-installed, activated copper POTS lines, thus speeding xDSL services to consumers with a maximum of carrier choice and a minimum of confusion and delay. Unlike most corporate offices, the vast majority of these consumers do not have a second phone line already installed expressly for data services. Line sharing would thus give residential consumers unprecedented access to Internet and other data services. Further, any operational issues that accompany line sharing, such as billing, maintenance and OSS requirements, can be remedied at the business level within the telecommunications industry and should not slow this process or prevent the Commission from issuing a line sharing mandate.

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[3] *Advanced Services FNPRM* ¶ 93.

[4] For example, Rhythms and MCI WorldCom recently completed a successful trial of voice-over-data transmissions over a single copper loop. "Rhythms and MCI WorldCom Complete Unprecedented Voice and Data Over DSL Test" (June 4, 1999) (attached hereto as Exhibit A); Covad Successfully Executes Trials of Combined Voice and Data Over DSL (June 7, 1999) (attached hereto as Exhibit B).

[5] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, Comments of Rhythms NetConnections Inc. at 25-28 (May 26, 1999) and Reply Comments of Rhythms NetConnections Inc. at 16-18 (June 10, 1999).

[6] 47 U.S.C. § 706 (1996). The Commission held in the *Advanced Services Order* issued August 8, 1998 that Section 251 unbundling rules apply to network elements necessary for advanced services. *Deployment of*

For although CLECs will continue to face significant roadblocks from recalcitrant ILECs due to such operational issues, line sharing will never be possible in the first instance without a line sharing mandate from the FCC.

A. The Commission Retains Authority to Require ILECs to Provide Line Sharing Over a Single Copper Line Under its Interstate Telecommunications Jurisdiction

As an initial matter, the Commission has sought comment on its tentative conclusion that it has authority to require ILECs to implement line sharing with advanced services providers.[7] There can be no doubt that the Commission has jurisdiction and authority to act on line sharing. The Commission's regulatory authority extends to all interstate wireline telecommunications.[8] As the FCC has recognized, DSL service is an interstate special access service that falls under its jurisdiction.[9] In addition, the Supreme Court held that the 1996 Act grants the FCC authority in Section 251 to determine basic tenets of loop-provisioning policy as part of its competition implementation authority.[10] Section 251 gives the Commission authority to "complete all actions necessary to establish regulations to implement the requirements of this section;"[11] including the requirement of "nondiscriminatory access to network elements on an unbundled basis at any technically feasible point."[12]

Line sharing is simply the provisioning of multiple services, for example voice and high-speed data services, over a single loop. As Rhythms and other DSL providers have demonstrated

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Wireline Services Offering Advanced Telecommunications Capability, Memorandum Opinion and Order, FCC 98-188 ¶¶52-58 (rel. Aug. 8, 1998).

[7] *Advanced Services FNPRM* ¶ 98.

[8] 47 U.S.C. § 2(b) (1996).

[9] *GTE DSL Order* ¶ 25.

[10] "We think that the grant in § 201(b) means what it says: The FCC has rulemaking authority to carry out the 'provisions of this Act,' which include §§ 251 and 252, added by the Telecommunications Act of 1996." *Iowa Utils. Bd. v. FCC*, 118 S.Ct. 721, 730 (1999).

[11] 47 U.S.C. § 251(d)(1) (1996).

[12] 47 U.S.C. § 251(c)(3) (1996).

in their comments to the Commission in the UNE Remand proceeding,[13] this functionality meets Section 251's criteria as an unbundled network element, because it is necessary to DSL provisioning and its absence would impair the ability of competitors to do business.[14] According to Section 153 of the Act, "the term 'network element' . . . includes features, functions, and capabilities" of the network.[15] Line sharing is patently a feature of network facilities. Therefore, under its clear authority under Section 251, the Commission can – and should, for the policy reasons set forth below – mandate the provision of this functionality as a UNE.[16]

B. Line Sharing is Necessary to Encourage Deployment of xDSL Services and to Provide Consumers With Optimal Choice of Basic and Advanced Telecommunications Services

The Commission's statements in the *Advanced Services FNPRM* as to the competitive necessity of line sharing are correct. It is undeniably true that "if shared line access could be made widely available, competition for advanced services would grow more rapidly."[17] Growth in advanced services competition would occur because line sharing will facilitate data CLEC access to copper loops, without requiring consumers to change their present voice provider. As Rhythms has explained previously, access to local loops is an unmitigated necessity for DSL providers.[18] The ILECs, as the sole source of copper loops, are required to provide these loops to

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[13] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket 96-98, Comments of Rhythms NetConnections Inc. (May 26, 1999); Comments of NorthPoint Communications at 14-15 (May 26, 1999); Comments of NAS at 28-31 (May 26, 1999).

[14] The Commission may choose to designate line sharing as a special access service. This designation may, however, cause significant difficulty for CLECs. For example, many ILECs prohibit CLECs from combining access services with UNEs. Designation of line sharing as a UNE could largely avoid such difficulty.

[15] 47 U.S.C. § 153(29).

[16] Rhythms has consistently maintained the necessity and technical feasibility of line sharing. *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket 98-147, Reply Comments of Digital Access Telecommunications Coalition at 13 (DATE). *See also* Letter of DATA Coalition to Chairman William Kennard, CC Docket 98-147 at 2-3 (Dec. 1, 1998).

[17] *Advanced Services FNPRM* ¶ 96.

[18] *Bell Atlantic Corporation for Relief from Barriers to Deployment of Advanced Telecommunications Services*, CC Docket No. 98-11, Comments of the DSL Access Telecommunications Alliance ("DATA") at 17-19 (Apr. 16, 1998) and Reply Comments of the DATA Alliance at 7 (May 6, 1998); *Deployment of Wireline Services*

competitors for the provision of both traditional POTS services[19] and advanced services.[20] Further, because copper loops have the capability of carrying POTS services and advanced services simultaneously, ILECs should be required to provide each functionality on a nondiscriminatory basis. Line sharing achieves this result.

An alternative basis for the Commission to mandate line sharing is the nondiscriminatory requirement of the 1996 Act. Section 251 of the 1996 Act requires that any feature or services that ILECs provide to themselves must be provided to competitive carriers. Section 251 provides that ILECs have the duty to provide access to interconnection and unbundled network elements "on rates, terms, and conditions that are just, reasonable, and nondiscriminatory."[21] The Commission has interpreted this provision to mean that "the access and unbundled network element provided by an incumbent LEC must be at least equal-in-quality to that which the incumbent provides to itself."[22] As the *Advanced Services FNPRM* recognizes, ILECs will provide line sharing to themselves by providing existing voice services over the same loop with ILEC DSL services.[23] Therefore, pursuant to its authority to enforce ILEC nondiscrimination, the Commission can mandate the availability of line sharing for all CLECs.

A federal line sharing mandate will directly further the policy goals of the 1996 Act with respect to advanced services development. A principal benefit to both consumers and xDSL

Offering Advanced Telecommunications Capability, CC Docket No. 98-147, Comments of Rhythms NetConnections Inc. at 4 (Sept. 25, 1998) and Comments of Rhythms NetConnections Inc. at 12-15 (May 26, 1999).

[19] 47 U.S.C.§ 251(c)(3)(1996); *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, FCC 96-325, 11 FCC Rcd. 15,499, 15, 689-90 (1996). In letters to Chairman Kennard, Ameritech, Bell Atlantic, BellSouth, SBC and US West pledged to continue provisioning loops as UNEs pending final Commission determination of unbundling obligations on remand from the Supreme Court in *Iowa Utilities Board v. FCC*, 119 S. Ct. 721 (1999).

[20] *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Memorandum Opinion and Order and Notice of Proposed Rulemaking, CC Docket 98-147, FCC 98-188 ¶¶ 52-56 (Aug. 7, 1998).

[21] 47 U.S.C. § 251(c)(2) and (3).

[22] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, FCC 96-325, 11 FCC Rcd. 15,499, 15,658 (1996).

[23] *Advanced Services FNPRM* ¶ 103.

carriers would be the cost savings that the FCC predicts in the *Advanced Services FNPRM*.[24] The Commission recognizes that "[s]hared line access could also remove any cost disadvantage that an advanced services only provider might face if it had to provide advanced services over a stand-alone line."[25] It follows perforce that in removing this cost disadvantage, the Commission will incent competitor DSL carriers to expand their rollouts and commit greater investment to providing less costly service. In short, DSL carriers will realize pro-competitive benefits of the 1996 Act far more quickly and more broadly than telephony carriers yet enjoy.

As a result of more feasible competitor entry into the xDSL services market, consumers – primarily residential consumers – will benefit from a greater choice among xDSL providers in a more efficient and inexpensive manner than present separate-line provisioning permits. Residential consumers will not be forced to wait for ILEC installation of an additional line to their home in order to obtain xDSL services. Nor will consumers have to support the cost of an unnecessary stand-alone line, but will pay only the cost of the existing POTS telephone loop they presently use. Further, consumers will realize far greater choice in DSL providers than is presently available because they no longer will be constrained to await and use ILEC-provisioned xDSL services, which will be provided over the consumer's existing POTS line. The consumer benefits of line sharing are tremendous and should encourage the Commission to adopt line sharing rules immediately for DSL services.

Finally, a Commission mandate for line sharing will encourage the most efficient use of the telecommunications network, which has always been a bedrock goal of the Commission and was echoed in the 1996 Act. Indeed, the Commission based its unbundling and pricing rules on

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[24] This cost savings will occur only if the Commission vigilantly ensures that ILECs do not impose discriminatory costs for the data portion of the loop that are greater than the costs incurred by the ILEC itself. *See infra* Section I.E.

[25] *Advanced Services FNPRM* ¶ 93.

consideration of the most efficient network on a going-forward basis.[26] By permitting two carriers to share the local loop, the Commission will maximize services provisioned over ILECs' existing network. This increased usage of the network, which is a goal in itself, will accrue tremendous economies of scale for both providers and users of telecommunications services.

In sum, the Commission should conclude that the 1996 Act's mandate for nondiscriminatory provisioning of network elements requires ILECs to offer line sharing to all data CLECs.

C. Line Sharing Is Technically Feasible and Will Not Harm the Network or Consumer Quality of Service

There can be no reasonable debate that line sharing is technically feasible. First, as the Commission has recognized, the ILECs presently provide xDSL services over the same line with existing traditional voice services.[27] ILEC tariffs consistently refer to xDSL services as an "overlay" service on existing voice lines.[28] There is no difference between ILEC-provisioned xDSL services and xDSL services provided by a competitor. In fact, neither ILEC nor CLEC DSL services present any issues of the technical feasibility of line sharing.

Second, present industry practice and testing shows that line sharing easily can be accomplished between two different telecommunications providers. In addition to the Pacific Bell-Concentric venture that the Commission discusses,[29] Rhythms and other carriers have performed independent testing of even more expansive voice-xDSL line sharing with industry-

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[26] *First Report and Order*, 11 FCC Rcd. at 15,721 (reasoning that access to interoffice transport would enable CLECs to build an efficient network), and 15, 685 (concluding that TELRIC costs will be based on the most efficient technology presently deployed in order to encourage carriers to design more efficient networks.)

[27] *Advanced Services FNPRM* ¶ 103.

[28] *See, e.g.*, GTE System Telephone Companies Tariff FCC No. 1, Transmittal No. 260 at 571.29 (Aug. 28, 1998); BellSouth Telecommunications Tariff FCC No. 1, Transmittal No. 476 at 7-58.12 (Aug. 18, 1998).

[29] *Advanced Services FNPRM* ¶ 103.

standard DSL equipment.[30] The tests successfully transmitted a circuit-switched telephone call through the public switched telephone ("PSTN") network simultaneously with packet-switched Internet traffic routed through a corporate local area network. Even more telling is that, in the Rhythms test, the transmissions came from two different carriers: Rhythms provided the Internet access while MCI WorldCom provided its own Class 5 PSTN switch. These developments underscore the Commission's conclusion that it "find[s] nothing in the existing record to persuade [it] that line sharing is not technically feasible."[31]

As to the appropriate definition of the line sharing UNE, the Commission is correct that its line sharing rules must not "mandate a particular technological approach to the use of a line for multiple services."[32] In order to avoid such an approach, the Commission should define line sharing simply as a loop functionality irrespective of "what constitutes the frequency above that used for analog voice service."[33] In this way, the Commission will not, as it notes, "arbitrarily freeze technological development"[34] of a technology that is rapidly re-defining itself and its abilities. In addition, defining line sharing as a generic functionality will answer the Commission's concern regarding "the continued viability of line sharing arrangements as telecommunications network architectures migrate from a circuit to a packet environment."[35] Once voice telephony becomes fully digitized, line sharing will continue to be feasible because xDSL technology will distinguish between digitized voice and digitized data transmitting over a shared line. Were the Commission to impose a line sharing rule based on defined loop frequencies, this transition would not be as immediate. Therefore, the Commission should adopt

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[30] "Rhythms and MCI WorldCom Complete Unprecedented Voice and Data Over DSL Test" (June 4, 1999) (attached hereto as Exhibit A); Covad Successfully Executes Trials of Combined Voice and Data Over DSL (June 7, 1999) (attached hereto as Exhibit B).

[31] *Advanced Services FNPRM* ¶ 103.

[32] *Advanced Services FNPRM* ¶ 101.

[33] *Id.*

[34] *Id.*

rules that require line sharing as a generic functionality, rather than the assignment of particular frequencies, to which all data CLECs must have access.

D. The Telecommunications Industry Can Resolve the ILECs' Operational Concerns Independently

The Commission should not decline or delay a mandate for line sharing on the basis of ILEC "operational" concerns.[36] Nothing in the 1996 Act indicates that operational feasibility is a prerequisite for implementation of local competition. Rather, Section 251 requires only that unbundling be predicated on technical feasibility. Having established that line sharing is technical feasible and thus amenable to ILEC provisioning, the Commission need not withhold its decision in order to engage in further discussion of additional implementation issues.

Any business or operational concerns raised by the ILECs should be viewed with skepticism by the Commission as an attempt to turn back the clock on the telecommunications industry. Because, as has been discussed, the ILECs are currently rolling out DSL services, they have an incentive to block any regulatory action that would facilitate DSL competitors' entry. Thus, ILECs are attempting to dissuade the Commission from mandating line sharing in order to secure their own retail DSL customers to binding services contracts.[37] Indeed, ILECs have historically raised the hobgoblin of "business" or "operational" concerns to forestall Commission implementation of pro-competitive rules. Moreover, to the extent that these concerns are genuine, the Commission should not permit persistent ILEC operational inefficiency prevent consumers from speedy access to DSL services.

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[35] *Advanced Services FNPRM* ¶ 107.

[36] *See Advanced Services FNPRM* ¶ 105.

[37] Bell Atlantic, for example, requires a one-year service commitment from its Infospeed DSL customers and imposes a fee for early termination. Bell Atlantic Tariff F.C.C. No. 1, Transmittal No. 1076 at 16.8(F), Original Page 918.43 (Sept. 1, 1998).

Further, the operational issues that the ILECs raise, namely billing, maintenance and repair issues, have always surrounded the development of local competition. For example, billing functionality is a component of Operations Support Systems ("OSS"), but the lack of such functionality at the time of the *First Report and Order* did not dissuade the Commission from requiring ILECs to provide OSS access,[38] nor did it halt the adoption of unbundling rules as a general matter. In the case of collocation, carriers have yet to finalize plans to facilitate CLEC access to physically collocated equipment, yet the Commission has held that ILECs must permit CLECs to repair and maintain this equipment.[39] Were the Commission to wait until final resolution of every operational issue arising from local competition, there would be no Commission orders on the matter at all.

The most powerful illustration of the relatively benign nature of "operational" concerns is the growth of competition in the long distance industry. When MCI entered the long distance market, separate billing, maintenance and repair of the network was performed seamlessly. Customers were not forced to buy a red phone for local services and a blue phone for long-distance services in order to enjoy MCI service. Indeed, it is unlikely that the RBOCs will have any "operational" problems in providing interLATA long distance services upon receipt of Section 271 approval. Thus, such concerns should not halt the advent of competition in DSL and other advanced services via line sharing rules.

The Commission should not hamstring competition in DSL services on the basis of unsubstantiated operational concerns. If the Commission orders line sharing, the industry, including the ILECs, will make it happen. The Commission's role should remain that of general rulemaker, not of line sharing micromanager. The telecommunications industry has and will

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[38] *First Report and Order*, 11 FCC Rcd. at 15,763-64.
[39] *Advanced Services Order* ¶ 49.

continue to work collectively at the business level to create viable solutions to line sharing implementation issues. At this time, however, the Commission should mandate line sharing in order that carriers can begin such development.

E. The Commission Should Require ILECs to Maintain Cost Parity for the Data Portion of the Line In Order to Prevent Anticompetitive or Discriminatory Pricing

The *Advanced Services FNPRM* also seeks comment on the proper pricing and cost allocation methods to govern line sharing.[40] The Commission should approach this issue in the same manner in which it determined general UNE pricing methodology: by requiring nondiscriminatory, cost-based pricing of unbundled elements and functionalities. Because line sharing is appropriately defined as a UNE,[41] the Commission should require that ILECs charge DSL providers the same rate per loop that the ILEC presently imputes to its own DSL services sharing a voice loop. In short, the Commission should adopt TELRIC pricing for line sharing.

TELRIC has governed all pricing of network elements and services under the 1996 Act, thus implementing Congress's mandate in Section 251 that ILECs provide access to the telecommunications network "at rates, terms, and conditions that are just, reasonable, and nondiscriminatory."[42] The Supreme Court has upheld the FCC's jurisdiction to promulgate the TELRIC methodology for UNE pricing.[43] This settled authority should extend to the data functionality of a copper loop, which should therefore be priced at the economic, incremental cost of its provisioning.[44]

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[40] *Advanced Services FNPRM* ¶ 106.

[41] "The Act's plain language thus demands that where the ILECs provide themselves with access to a feature or functionality of the network, such as line sharing, they must make it available to other carriers." Comments of Rhythms at 17 (May 26, 1999).

[42] 47 U.S.C. § 251(c)(3) (1996).

[43] *Iowa Utils. Bd. v. FCC*, 118 S.Ct. 721, 733 (1999).

[44] *See generally First Report and Order*, 11 FCC Rcd. at 15,844.

The incremental cost of providing DSL services over a pre-installed, operational voice loop is, in fact, zero. The ILECs obviously have no additional costs for installation or turn-up of the loop. And according to the strict standards that ILECs maintain for xDSL-capable loops, namely that the loops must not be so long as to have load coils or repeaters placed on them, it is unlikely that the ILEC will incur any loop de-loading costs for its own services. Thus, when ILECs launch their own DSL services, they will not be forced to recover additional loop costs.

For pricing purposes, ILEC DSL costs are the best evidence of ILEC costs of provisioning DSL services over existing voice loops. The nondiscriminatory requirements of the 1996 Act mandate that ILECs treat data competitors indistinguishably from the way they treat themselves. *For example, Bell Atlantic has indicated that it imputes loop costs of $0.00 to its retail DSL services; its competitors should not be forced to pay more than that.* Thus, to ensure nondiscriminatory treatment of data competitors, CLECs must be charged the same costs ILECs impute to themselves for the data portion of a shared copper loop.

Not only is such pricing a statutory necessity, it makes sound policy sense as well. Were ILECs permitted to impose rates for loop sharing that are above incremental cost, their compensation for a loop – which includes the voice portion and the data portion – would constitute double-recovery of their actual costs. ILECs already pass through the cost of a voice grade copper loop to their customers each month. If data CLECs were forced to pay an additional cost for use of the data portion of the same loop, not only would ILECs receive a windfall that is unlawful under the 1996 Act, but consumers would overpay for the loops running to their homes. This scenario assumes that ILECs will continue to pass through the entire cost of the loop to their POTS-only customers after their own DSL services are rolled out. If, however, the ILECs will split the costs of the loop, which in all likelihood will carry POTS, DSL, and

other services, among the various services, data CLECs should pay only the portion attributed to the data use of the loop.

Rhythms emphasizes that it does not seek to avoid paying for the data portion of a loop. To the contrary, Rhythms will pay the "just, reasonable and nondiscriminatory" rate according to the terms of the 1996 Act and the Commission's TELRIC methodology. Above-cost, discriminatory pricing is unlawful under the 1996 Act and should be prohibited for line sharing just as it presently is prohibited for existing UNEs. So long as ILECs charge their own DSL services nothing for use of a shared loop, Rhythms and other CLECs should pay the same price – nothing. Whatever the ultimate decision on line sharing prices may be, the Commission should adopt rules that require parity in pricing between ILECs and data CLECs for the data portion of shared local loops.

II. THE COMMISSION SHOULD TAKE AN ACTIVE ROLE IN THE DEVELOPMENT AND APPLICATION OF xDSL TECHNOLOGY STANDARDS IN ORDER TO ENSURE A COMPETITIVELY NEUTRAL PROCESS AND OUTCOME

Rules governing spectrum compatibility and management will profoundly impact the rapid and efficient deployment of xDSL technologies thus defining the future of competition for DSL services. The tremendous competitive significance of these rules requires that they be developed in an open forum without excessive influence from any sector of the telecommunications industry, especially the ILECs that have an incentive to limit competition in xDSL services. The Commission's *Advanced Services Order*[45] thus correctly concludes that ILECs must not unilaterally impose xDSL spectrum standards on data CLECs. The Commission also correctly states that it "can facilitate industry development of fair standards through this

[45] *Advanced Services Order* ¶¶ 68-69.

Further NPRM."[46] In keeping with this policy, the Commission should take an active participatory role in industry standards-setting processes to ensure that both the development and application of xDSL spectrum rules are competitively neutral and will, as the Commission hopes, "allow for the more rapid deployment of new technologies."[47]

When considering possible measures for managing spectrum issues, the Commission should be aware of the difference between interference and harmful interference in the network. Interference is a normal phenomenon on the network even with only traditional POTS traffic. Thus, the only legitimate concern pertains to harmful interference among services that could substantially degrade quality of service. There is no regulatory scenario that will completely eradicate POTS interference, nor should the Commission demand that the industry completely eradicate xDSL-related interference. Rather, the Commission should ensure that harmful interference will be minimized without stifling technological innovation in advanced services.

Rhythms concurs with the structure and conclusions that the Commission establishes in the *Advanced Services FNPRM.* The Commission has appropriately limited the ability of ILECs to impose unilateral and potentially anticompetitive spectrum rules on other DSL providers. In limiting such ILEC behavior, the Commission properly relies on voluntary industry standards, developed through open and balanced consensus, for ensuring the compatibilty of technologies and the management of harmful spectrum interference. Further, the Commission's approach provides a mechanism for deployment of DSL technologies that demonstrate that they can co-exist in the network. This approach prevents undue delay as the lengthy standardization process wends it way to establishing technical standards. Industry standards-setting is an often slow process that produces extremely conservative technical parameters. As such, the Commission

[46] *Advanced Services FNPRM* ¶ 84.
[47] *Advanced Services Order* ¶ 77.

appropriately accords such standardized technologies the right of deployment. This process will ensure that American consumers will not face undue delay in receiving the benefits of technological innovation while ensuring the reliability of the network.

A. The Commission Has the Authority to Participate in Industry Standards-Setting Bodies

The Commission should adopt its tentative conclusion to participate in the telecommunications spectrum standards-setting process.[48] Further, for those technologies for which industry standards have been determined, specifically for ADSL, IDSL, and HDSL, the Commission should retain oversight over their implementation and enforcement in order to prevent discriminatory application by the ILECs that control all rollout of xDSL technologies. The Commission's authority to take such an active role derives from both statutory mandate and historical participation in shaping technical policy for wireline and broadcast communications.

The Communications Act of 1934 authorizes the Commission to regulate all interstate communications by wire, radio and all cable services.[49] Pursuant to this authority, the Commission exercises jurisdiction over equipment that interconnects to the telecommunications network,[50] as well as a host of technical issues from radio frequency assignment to microwave emissions. Participation in industry standards-setting is no different from any of these activities. Further, due to the grave competitive implications inherent in xDSL spectrum standards, the Commission's involvement is all the more necessary.

Although it is true that the Commission has traditionally deferred voluntarily to industry spectrum standards bodies, a policy of deference is not best applied to issues of spectrum compatitibility. Moreover, this traditional policy does not imply that the Commission has ceded

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[48] *Advanced Services FNPRM* ¶ 79.
[49] 47 U.S.C. § 256.
[50] 47 C.F.R. Part 68.

its jurisdiction over these matters to industry fora. Rather, the Commission's approach to now has remained passive in order to enable the market to establish competitively neutral industry standards on myriad technical issues. That said, however, the Commission retains jurisdiction to intercede where industry standards fail adequately to accommodate Commission policies, including its policy of competitive neutrality. For instance, if disproportionate representation in a standards body results in skewed standards that have a clear anticompetitive impact on an under-represented segment of the industry, the Commission has authority to remedy this imbalance. In the *Intelligent Networks* proceeding, for example, the Commission concluded that

> Historically, the Commission has avoided a dominant role in standards-setting as long as the activities of standards bodies do not frustrate the Commission's goals and policies. However, to the extent that such activities do not support public interest goals, it has reserved a role for itself and could play some part in standards development.[51]

Just as the Commission found that intervention was necessary in *Intelligent Networks*, the Commission's participation in the crucial area of industry standards-setting for spectrum compatibility and management is necessary to ensure that any necessary intervention will be accomplished expeditiously.

Therefore, the Commission should actively participate in the American National Standards Institute ("ANSI") T1E1.4 Subcommittee Working Group on a going-forward basis. Moreover, as Rhythms explains below,[52] the Commission should exercise its authority over advanced telecommunications services to take decisive action where the Subcommittee has not yet set final standards in order to encourage development of new or modified xDSL technologies that will benefit consumers.

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[51] *Intelligent Networks*, Notice of Proposed Rulemaking, 8 FCC Rcd. 6813, 6820 n.64 (1993).
[52] *See infra* Section II.C.

B. The Commission Should Adopt a Three-Tiered Approach to Ensure Uniform and Nondiscriminatory Maintenance of xDSL Spectrum Compatibility

The Commission has sought comment on proposed methods "to develop long-term standards and practices" for xDSL technologies.[53] According to its clear authority over advanced wireline services, the Commission should adopt a proactive xDSL approval process, based on the rules outlined in the *Advanced Services Order*,[54] that will operate parallel to the T1E1.4 Subcommittee process. The Commission should not rely solely on the actions of industry bodies to develop standards for xDSL technology. The standards-setting process is time-consuming in that it requires a consensus among all Subcommittee members in order to create binding technical rules. Though this consensus process, when properly balanced, should lead to workable industry standards, it should not be allowed to create a bottleneck for deployment of innovative technologies and improvements that pose no harm to the network. Accordingly, the Commission should adopt its proposed three-tiered approach, which relies on practical experience with new xDSL technologies. In this way, innovation will flourish while the industry works to "establish competitively neutral spectral compatibility standards and spectrum management rules and practices so that all carriers know, without being subject to unilateral incumbent LEC determinations, what technologies are deployable and can design their networks and business strategies accordingly."[55]

The Commission has correctly concluded that the establishment of Power Spectral Density (PSD) masks for xDSL technologies is a necessary, but insufficient, means of regulating spectrum compatibility.[56] PSD masks appear to provide a useful tool for assessing the

[53] *Advanced Services FNPRM* ¶ 79.
[54] *Advanced Services Order* ¶¶ 67-68.
[55] *Id.* ¶ 63.
[56] *Advanced Services FNPRM* ¶ 66.

compatibility and interaction of particular xDSL technologies. Yet although the T1E1.4 Subcommittee has developed general standards for ADSL, IDSL and HDSL, there are several variations of these types of DSL technologies that presently do not fall within T1E1.4's existing Technical Standards and Technical References. Further, standards for various speeds of SDSL are still in the development process. The absence of formal technical specifications should not, however, preclude innovation in DSL services. The DSL industry is anxious to develop and test new technologies and should not be delayed by the workings of T1E1.4.

The Commission should formally adopt the three-part test articulated in the *FNPRM* to encourage development and deployment of new DSL services, without compromising quality of network services. This test should be nationally uniform in order to provide predictability for xDSL carriers to make informed network investment, thus furthering the Commission's goal to "establish competitively neutral spectral compatibility standards and spectrum management rules and practices so that all carriers know, without being subject to unilateral incumbent LEC determinations, what technologies are deployable and can design their networks and business strategies accordingly."[57]

To this end, the Commission should adopt the following criteria:

1. Any network technology presently approved by the Commission, any state commission, or an industry standards body is approved for deployment by any carrier.[58]

2. Any network technology that has been successfully deployed for six (6) months will be presumed technically proper for deployment. In such a case, the ILEC seeking to preclude deployment would bear the burden of proving that the new technology causes harmful network interference.[59] Further, any technology for which the T1E1.4 Subcommittee has developed a PSD mask will be presumptively approved for deployment.

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[57] *Advanced Services Order* ¶ 63.
[58] *Advanced Services FNPRM* ¶ 67.
[59] *Id.* ¶ 67.